R. SERRANO, Y. D. BOYKO, L. W. HERNANDEZ, A. LOTUZAS, D. SARLAH* (UNIVERSITY OF ILLINOIS, URBANA, USA) Total Syntheses of Scabrolide A and Yonarolide

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Syntheses of (-)-Scabrolide A and (-)-Yonarolide



Category

Synthesis of Natural Products

Key words

(–)-scabrolide A

(-)-yonarolide

norcembranoid terpenoids

Ni-catalvzed annulation

Riley oxidation

Liebeskind-Srogl coupling

intramolecular Michael addition/ elimination



Significance: Sarlah and co-workers report the total syntheses of (-)-scabrolide A and (-)-yonarolide, two norcembranoid terpenoids. The natural products feature a 5/6/7-fused carbocyclic ring system and an additional γ -lactone.

Comment: Bicyclic lactone F is accessed by Ni-catalyzed annulation using cyclopropane **C** and subsequent fragmentation. The two building blocks F and **H** were fused in a Liebeskind–Srogl coupling. An intramolecular Michael addition elimination cascade using a zinc-amido base furnishes enone L.

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